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Assensment skills of doctoral students in ICT and communication with doctoral training in Moroccan university

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Abstract

The integration of new technologies of information and communication (NTIC) in education poses the problem of the information processing, for those which have to use them within the framework of their research. Besides the technical skills recognized until then to the doctoral student. What knowledges and technological know-how will he have if he intends to capitalize and integrate ICT in their research?This study is the result of reflections based on the capitalization of the expertise accumulated by the team of the Research Observatory Teaching University Pedagogy "ORDIPU"as a result of training and NTIC research already completed. This study puts the NICT skills, within the field of information competencies, that a phd student, should be acquired, the student, and considers them as ways to serve its professional skills of the doctoral student. This study allowed us to evaluate skills in ICT of doctorat students , theirlevel of control relative to each year of doctorate,and also made it possible to evaluate thedevelopment of these competences in NTIC withthe last years in doctoral formation. Thedoctorands will be the judges of this evaluationthanks to tools for auto--evaluation.

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Keywords: Informational skill- New technologies of Information and Communication (NTIC) - Higher education, treatment of the information.

1. Introduction

The integration of the NTIC in teaching is an option installed for following the evolution of the academic world and the professional world; in touch with a world which does not cease increasing in the fields economic, technological and political. The Framework of action of Dakar (April 2000) identified the use of new technologies of information and communication like one of the principal strategies to achieve the objectives of the EPT (Education For All).

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The NTIC made a great change in the world of research, and became a very essential tool for its development. The doctorand as any other researcher migrated towards the use of the NTIC because they give him a large opening on information enabling him to carry out its research at the time of the doctoral years of study.

We realised our study in order to see how the doctorands behave with this tool? And if their skills relating to the NTIC develop year after year in the doctorat?

2. Method

a. Participants:

The survey was conducted with the doctorands of the (1st, 2nd, 3rd and more) of the Faculty of Science Ben Me Sik of the university Hassan II of Casablanca).

b. Measures:

Our study was realized by a questionnaire "Questionnaire of self-assessment of skills of phd students of the Faculty of Ben M'Sik" made up of 155 questions, organized in 4 scales of measurements:
Scale of measurement 1: General informations of the Phd student (Gender, Year of study… etc).
Scale of measurement 2: Situation of the Phd student (How a phd student is located compared to his institutional environment and the advance of my research project).
Scale of measurement 3: Evolutionary report of the skills put in work during the doctorate (Information processing, Communication, self-training, Project management, etc.)
Scale of measurement 4: How the doctorand is projected from the professional point of view.

c. Procedure:

We carried out an pre-investigation near by 33 doctorands. 15 to 30 minutes was devoted to fill out of the questionnaire.
A Training at organized in collaboration with CEDoc, which had as a subject "professional skills of the doctorands, developed wih of the Doctoral trainings "self-assessment".
Sample: 160 doctorands of several disciplines, distributed on three stages:

- Stage 1 (At the beginning of doctorate).
- Stage 2 (In the medium of doctorate).
- Stage 3 (In the final stage of doctorate).

d. Analysis:

I. Information processing:

Table.1: Information processing - Stage 1

	Stage 1			
	Weak	Insufficient	Satisfying	Very good
I practise a documentary day before	11,90%	18,20%	19,50%	3,10%
I control the research methods bibliographical (abstracts, databases, Internet,…)	6,90%	17,60%	17,60%	10,70%
I can manage my electronic database	6,30%	22,00%	15,10%	9,40%
I can write a bibliographical synthesis	8,80%	23,30%	16,40%	4,40%
I attend seminars, days of study or conference	8,20%	11,30%	18,20%	15,10%
I can extract from the exploitable data starting from my gross profits	10,10%	17,60%	19,50%	5,70%

I can interpret the exploitable data	10,10%	15,10%	23,30%	4,40%
I can organize and present data	7,50%	17,00%	20,80%	7,50%

Stage 1: Most of the phd students declare, their methods of interpretation, organization and their analysis of exploitable data, are Insufficient.
And **11.90%** are less close to the practice of the documentary watch and the methods of bibliographical synthesis.

Table. 2: Information processing - Stage 2

	Stage 2			
	Weak	Insufficient	Satisfying	Very good
I practise a documentary day before	5,00%	3,80%	8,20%	5,70%
I control the research methods bibliographical (abstracts, databases, Internet,…)	1,90%	4,40%	8,20%	8,20%
I can manage my electronic database	1,90%	1,90%	11,90%	6,90%
I can write a bibliographical synthesis	1,30%	3,80%	11,30%	6,30%
I attend seminars, days of study or conference	1,90%	1,30%	11,30%	8,20%
I can extract from the exploitable data starting from my gross profits	1,30%	3,80%	11,90%	5,70%
I can interpret the exploitable data	0,60%	3,10%	14,50%	4,40%
I can organize and present data	0,60%	1,90%	11,30%	8,80%

Stage 2: Less than **10.00%** of the doctorands affirm their methods of interpretation, of organization and analysis of exploitable data, are insufficient.
Only **04.40%** are far from the practice of the documentary watch and the methods of bibliographical synthesis.

Table.3: Information processing - Stage 3

	Stage 3			
	Weak	Insufficient	Satisfying	Very good
I practise a documentary day before	11,90%	18,20%	19,50%	3,10%
I control the research methods bibliographical (abstracts, databases, Internet,…)	6,90%	17,60%	17,60%	10,70%
I can manage my electronic database	6,30%	22,00%	15,10%	9,40%
I can write a bibliographical synthesis	8,80%	23,30%	16,40%	4,40%
I attend seminars, days of study or conference	8,20%	11,30%	18,20%	15,10%
I can extract from the exploitable data starting from my gross profits	10,10%	17,60%	19,50%	5,70%
I can interpret the exploitable data	10,10%	15,10%	23,30%	4,40%
I can organize and present data	7,50%	17,00%	20,80%	7,50%

Stage 3: Less than **04.00%** of the doctorands affirm that their methods of interpretation, organization and analysis their exploitable data, are insufficient.
Only **05.00%** remain far from the practice of the documentary watch and the methods of bibliographical synthesis.

Table.4: Information processing - Total

	Total			
	Weak	Insufficient	Satisfying	Very good
I practise a documentary day before	21,40%	30,80%	37,90%	10,70%
I control the research methods bibliographical (abstracts, databases, Internet,…)	11,30%	27,00%	38,40%	23,30%
I can manage my electronic database	09,40%	32,10%	39,60%	18,09%
I can write a bibliographical synthesis	12,60%	37,70%	39,00%	10,70%
I attend seminars, days of study or conference	12,60%	17,60%	41,50%	28,30%
I can extract from the exploitable data starting from my gross profits	13,80%	27,00%	45,30%	13,80%
I can interpret the exploitable data	12,60%	27,00%	50,30%	10,10%
I can organize and present data	09,40%	26,40%	44,70%	19,50%

Total: An average of 19.7% of the phd students don't practice the bibliographical research methods **18.43%** don't have capacity to exploit and analyze data and results.

II. NTIC (New technologies of Information and Communication):

1. Stage 1:

Table.5: Skills of the Phd students in NTIC - Stage 1

	Stage 1			
	Weak	Insufficient	Satisfying	Very good
Tools of office automation	05,80%	03,90%	10,70%	36,90%
Management tools of databases	12,60%	10,70%	19,40%	14,60%
Programming language	14,00%	15,00%	14,00%	13,00%
Computer tools related to the document retrieval	17,70%	11,50%	13,50%	12,50%
Other software (organization, Work, collaborative)	17,70%	11,50%	13,50%	12,50%

Stage 1: An average of **15.50%** of the phd students estimate themselves weak in tools of management of databases, programming language, tools and software related to the documentary retrieval.
Whereas **05.80%** are weak out in office automation tools of the daily.

2. Stage 2:

Table.6: Skills of the Phd students in NTIC - Stage 2

	Stage 2			
	Weak	Insufficient	Satisfying	Very good
Tools of office automation	01,90%	01,00%	04,90%	14,60%
Management tools of databases	03,90%	04,90%	07,80%	05,80%
Programming language	05,00%	04,00%	06,00%	08,00%
Computer tools related to the document retrieval	06,20%	00,00%	08,30%	08,30%

Other software (organization, Work, collaborative)	06,20%	00,00%	08,30%	08,30%

Stage 2: Approximately **06.00%** of phd students are weak out in management tools of databases, programming language, tools and software related to the document retrieval.
Whereas **01.90%** are low in using the office automation tools of the daily newspaper.

3. Stage 3:

Table.7: Skills of the Phd students in NTIC - Stage 3

	Stage 3			
	Weak	Insufficient	Satisfying	Very good
Tools of office automation	01,00%	00,00%	03,90%	15,50%
Management tools of databases	04,90%	02,90%	02,90%	09,70%
Programming language	06,00%	03,00%	04,00%	08,00%
Computer tools related to the document retrieval	06,20%	01,00%	04,20%	10,40%
Other software (organization, Work, collaborative)	06,20%	01,00%	04,20%	10,40%

Stage 3: 05.50% are estimated weak out of management tools of databases, programming language, tools and software related to the documentary retrieval.
Whereas **01.00%** are seen not controlling the office automation tools.

Table.8: Skills of the Phd students in NTIC – Total

	Total			
	Weak	Insufficient	Satisfying	Very good
Tools of office automation	08,70%	04,90%	19,40%	67,00%
Management tools of databases	21,40%	18,40%	30,10%	30,10%
Programming language	25,00%	22,00%	24,00%	29,00%
Computer tools related to the document retrieval	30,20%	12,50%	26,00%	31,20%
Other software (organization, Work, collaborative)	30,20%	12,50%	26,00%	31,20%

The whole of the phd students of **stage 3** judge themselves able to control the tools office automation.
Only **3.00%** find their sills insufficient in databases and programming.

Reports:

Reports of stage 1: It's noted that the doctorands of the first year in doctorate claim to have difficulties of control of the software of documentary retrieval and of programming, also, their capacities of use of the scientific and technical literature their data are very weak.
Reports of stage 2: The phd students of the second year, affirm to don't have a difficulties in the accessibility of the use of the scientific and technical literature to their data, and declare a weak control of the software of documentary retrieval as well as programming.
Reports of stage 3: As for the doctorands of the third year, affirm to control the software of documentary retrieval as of programming and judge have any difficulties compared to the accessibility of the use of the scientific and technical literature their data.

3. Conclusion

Beyond skills related to any particular and personal experiment, the phd students develop multiple other skills where implies knowledge, know-how and how to be. The psychologists Pierre Rabardel and Pierre and Samurcay Renan (2004) showed that the tasks carried out in doctorate have a “productive” dimension (realization of a thesis) and a “constructive” dimension (transformation of oneself, realization of trainings and acquisitions).

For Kemal F (2014), competences of the doctorands develop while year after year spent in doctorate, with the frequent practice of the activities leading to the acquisition of these skills, and are added or reinforce the skills acquired in the course of the courses of before the doctorate.

In our study, we conclude that skills in NTIC of the doctorands of the Faculty of Science Ben Me Sik of Casablanca, like all of universities in morocco; develop in years of thesis, and allow to the doctorands to become open on other fields of documentary research activity, like their capacities of use of the scientific and technical literature their data.

References:

Fayon, D, (2000), L'impact des NTIC dans l'enseignement superieur. *Revue de l'EPI (Enseignement Public et Informatique),* (98), 81-83.

Kemal F, al., (2014), The Skills of Phd students of Faculty of Sciences Ben M'Sik-Morocco, for processing information, *communication and self-learning,* Volume 10, PP.39-43.

Lelievre F, avril (2000), L'economie de l'internet, in Cahiers francais, n° 295, mars.

Rabardel P., Samurcay R., (2004), Modeles pour l'analyse de l'activite et des competences, propositions, In Samurcay Renan & Pastre Pierre (Dir.), Recherches en didactique professionnelle, Octares, Toulouse.

Poulin S, (2001), Bilan de competence : valorisation professionnelle du doctorat, Bureau d'aide a l'insertion professionnelle de l’Universite Paris I Pantheon-Sorbonne au sein de l’Ecole doctorale de science politique (UFR 11) de l’Universite Paris I Pantheon-Sorbonne.